



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,914	01/18/2001	Galen Mark Garais	6500-1583.2	8471

7590 03/13/2003

ROBERT F. I. CONTE
LEE, MANN, SMITH, MCWILLIAMS, SWEENEY & OHLSON
P.O. BOX 2786
CHICAGO, IL 60690-2786

EXAMINER

MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
----------	--------------

2831

DATE MAILED: 03/13/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,914

Applicant(s)

GAREIS ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed October 21, 2002 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Treatment of Claims

2. The examiner assumes that the applicant intends to state "a plurality of adjacent projections" rather than "a plurality of adjacent splines".

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 2831

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 11 and 14- 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (JP Pat Num 4-332406, herein referred to as Ikeda) in view of Arroyo et al (Pat Num 4,807,962). Ikeda discloses a shield cable (Figs 1-4) capable of being used as a communications cable (i.e. data cable, Page 2, lines 7-10). Specifically, with respect to claim 11, Ikeda discloses a data cable (Fig 1) that may have a plurality of twisted pairs conductors (9, as shown in Fig 4a) and an interior support (1) comprising a longitudinally extending central portion (2) forming the core of the support (1), a plurality of projections (denoted by examiner as reference number 25) radially extending from the central portion (2), wherein each one of the projections (25) is adjacent to two other projections (25) thereby forming a plurality of projections (25), a different open area (3) defined by each of the plurality of adjacent projections (25), wherein one twisted pair conductor (9) from the plurality of twisted pairs (9) is disposed in each different open area (3) defined by each of the plurality of adjacent projections (25), wherein each twisted pair conductor (9, Fig 4a) has a first conductor (top 7) surrounded by a first insulation (top 8) and a second conductor (bottom 7) surrounded by a second insulation (bottom 8), wherein the first and second insulated conductors (top and bottom 7 & 8, respectively) are twisted about each other to form a twisted pair conductor (9). With respect to claim 12, Ikeda discloses that the open area (3) is a groove (Page 6, line 8). With respect to claim 13, Ikeda discloses that the projection (25) is an arm (Fig 1). With

Art Unit: 2831

respect to claim 14, Ikeda discloses a data cable (Fig 1) that may have a plurality of twisted pairs conductors (9, as shown in Fig 4a) and an interior support (1) comprising a longitudinally extending central portion (2) forming the core of the support (1), a plurality of projections (denoted by examiner as reference number 25) extending from the central portion (2), wherein each one of the projections (25) is adjacent to two other projections (25) thereby forming a plurality of projections (25), a open area (3) defined by each of the plurality of adjacent projections (25), wherein one twisted pair conductor (9) from the plurality of twisted pairs (9) is disposed in each different open area (3) defined by each of the plurality of adjacent projections (25), wherein each twisted pair conductor (9, Fig 4a) has a first conductor (top 7) surrounded by an first insulation (top 8) and a second conductor (bottom 7) surrounded by a second insulation (bottom 8), wherein the first and second insulated conductors (top and bottom 7 & 8, respectively) are twisted about each other to form a twisted pair conductor (9). With respect to claim 16, Ikeda discloses that each of said projections (25) is selected from arm (Figs 1-3). With respect to claim 17, Ikeda discloses that each of the open areas (3) is selected from a groove (Page 6, see description for 3).

However, Ikeda doesn't necessarily disclose at least one of the projections being free from protuberances substantially restricting an opening into any said open areas (claim 11), nor the open area having a volume equal to or greater than a volume of at least one projection adjacent to each open area (claim 14), nor the interior support having a helically twist (claim 15).

Arroyo et al (Pat Num 4,807,962, herein referred to as Arroyo). Arroyo teaches a cable (Figs 1-6) having a fluted core, which provides strength for the cable as well as the compartments (Col 1, lines 9-12) and is relatively inexpensive (Col 3, lines 21-27). Specifically, with respect to claim 11, Arroyo teaches a cable (20, Fig 1) comprising a fluted strength member (22), having a plurality of grooves (28, i.e. open areas) and ribs (26, i.e. projections), wherein the strength member (22) is star shaped (Col 4, lines 20-24) which is free from protuberances substantially restricting the openings in the open areas (28, Fig 1). With respect to claim 14, Arroyo teaches that the flute (22) has an open area (28) that has a volume greater than the volume of the at least one projection (26) adjacent to the open area (28, Fig 1). With respect to claim 15, Arroyo teaches that the flute (49, Fig 3) may be helically twisted (Col 5, lines 10-12).

With respect to claims 11 and 14-15, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the interior support (i.e. flute) of Ikeda to comprise the flute having star-shaped configuration as taught by Arroyo because Arroyo teaches that such a configuration provides strength for the cable as well as the compartments (Col 1, lines 9-12) and is relatively inexpensive (Col 3, lines 21-27) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

Response to Arguments

3. Applicant's arguments with respect to claims 11-17 have been considered but are moot in view of the new ground(s) of rejection. With respect to the argument that Ikeda clearly cannot be combined with a reference having the configurations absent in Ikeda because Ikeda clearly teaches surrounding the conductors, the examiner respectively traverses. While Ikeda clearly teaches the projections having a portion surrounding the conductors, Ikeda also teaches that the interior support can have all types of variations in the design such as square. Therefore based on this statement, one can assume that Ikeda can have any shape. However, as a matter of policy of the Patent Office, a teaching reference, Arroyo has been disclosed for its teaching of a support structure having a support member that is star shaped (Col 4, lines 20-24) which is free from protuberances substantially restricting the openings in the open areas (28, Fig 1), has an open area (28) that has a volume greater than the volume of the at least one projection (26) adjacent to the open area (28, Fig 1) and may be helically twisted (Col 5, lines 10-12), for the purpose of providing a cable with additional mechanical strength in the compartments (Col 1, lines 9-12) and which can be manufactured for relatively cheap (Col 3, lines 21-27). Based on the disclosure of Ikeda, that the support structure can have any shape, and the teaching of Arroyo, there does exist a motivation to combine the teachings of Ikeda and Arroyo to have a support structure that is relatively cheaper than prior art support structure, while still maintaining the primary objective, which is to keep the interior components (i.e. fiber or conductors) equally and radially spaced. Secondly, there also exist an expectation of success, considering that Ikeda

discloses that the support structure can have any shape. Thirdly, all of the claim limitations are taught by the combination, therefore the criteria for establishing a prima facie of case of obviousness are present. In light of the above statements, the examiner respectfully submits that it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the interior support (i.e. flute) of Ikeda to comprise the flute having star-shaped configuration as taught by Arroyo as explained in the rejection above. With respect to the applicant's argument that Ikeda doesn't recognize that additional air ensures that the cable construction will have a better attenuation, the examiner respectfully traverses. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Allowable Subject Matter

4. Claim 1 is allowed.
5. The following is an examiner's statement of reasons for allowance: This invention deals with a data cable comprising an interior support wherein the support has a cylindrical longitudinal extending central portion, a plurality of splines radially extending from the central portion along a length wherein the splines have a triangular cross-section with the base of the triangular forming part of the central portion, and a shield having a lateral fold and being supported by the triangular splines (Claim 1). The above

stated claim limitations, in combination with other claim limitations, is not taught or suggested by the prior art of record. While Ikeda discloses that the overall spacer may be of any shape, Ikeda is silent to what shape the projections may have, besides the projections shown in the figures and doesn't disclose the shield having a lateral fold. Also, based on the amendment submitted on January 18, 2002, which encloses a declaration under 1.131, in which the applicant swears that the claimed invention thereof was prepared prior to the September 15, 1995 (priority date of Prudhon reference 5,952,615), most of the relevant prior art cannot be utilized. Therefore, the cited claim limitations, in combination with other claim limitations, is not taught or suggested by any of the prior art references of record.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30 a. m.-6:00 p.m.(alternating Friday's off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


WHM III
March 10, 2003